VORTEX®

SPARC™ Red Dot

OWNER'S MANUAL

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VORTEX®

SPARC™ Red Dot

Designed from the ground up for rapid, both eyes open shooting, the compact Vortex SPARC™ (Speed Point Aiming for Rapid Combat) red dot is ideally suited for fast action situations with a wide variety of firearms, bows and crossbows.

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The Vortex SPARC Red Dot Scope

(Shown on Low Riser)

SPARC with Magnifer

SPARC Red Dot Scope Specifications

Waterproof	Yes
Fogproof	Nitrogen gas purging
Shockproof	Yes
Eye Relief	Unlimited
Reticle Dot Size	2 moa
Reticle Dot Color	Red
Illumination	Variable 10-position intensity
	Night vision mode
Parallax	Parallax free past 50 yards
	Inside 50 yards, one inch error or less
Magnification	1x (2x with add-on magnifier)
Weight	5.2 ounces (without base)
Length	3 inches
Objective Lens Diameter	22 mm
Ocular Diameter	22 mm

Adjustment Specifications

Windage	90 moa
Elevation	90 moa
Per Rotation	45 moa
Per Click	1 moa

Included Accessories

- 2x Magnifier
- Tall Riser
- Short Riser
- Riser Shim
- (2) CR 2354 Batteries
- Hex wrench

Available Accessories

- VMX3 Magnifier
- ARD filter

- 2x Magnifier

CR 2354 Battery 1300 Hour Average Operating Time

Mode of Operation	Normal	Night Vision
Maximum Brightness	120 hours	4200 hours
Minimum Brightness	3400 hours	4600 hours

Riflescope Adjustments

Powering Up

Install battery in the compartment with the battery lettering facing outwards. Use the power on/power off button to activate the illuminated dot. To shut the SPARC off, push and hold the button for five seconds. If you forget to turn the SPARC off after use, it will automatically shut down in six hours.

This button powers the illuminated dot on and off.

Battery

To replace the battery, remove the outer cover using a coin and drop the battery out. Install a new battery with the lettering facing outwards. When replacing the cover, be sure it is snug and that sealing O-ring is in place.

- Battery life depends on dot intensity setting
- Replacement battery: CR 2354

Brightness Adjustments

The Vortex SPARC red dot sights offer 10-position variable illumination. Dot brightness may be increased or decreased by using the appropriate button: top button increases brightness, lower button decreases brightness.

Night Vision Device Mode

Pushing the NV button will activate the night vision mode on the SPARC. The Night Vision mode will set the brightness to the lowest possible level, which will work best with most night vision devices. While in NV mode, the brightness Up/Down knobs will yield two brightness adjustments if desired.

To de-activate the NV mode and return to the standard daytime mode, simply press the NV button one more time.

- The SPARC automatically returns to your previously selected daytime brightness level.
- The SPARC automatically returns to the previously selected brightness level when you return to the NV mode.

Windage and Elevation Adjustment

The Vortex SPARC red dot scope incorporates coin or screwdriver adjustable elevation and windage dials with audible clicks. The covers use a raised bar which may also be used to adjust the dials.

To adjust the settings:

1. Remove the covers.

2. Turn the adjustment dial in the appropriate Up/Down, Left/Right direction as indicated by the arrows. Each small click will move the point of impact one Minute of Angle (MOA). 1 moa will correspond to one inch at 100 yards, two inches at 200 yards, three inches at 300 yards, etc. Move the dials in the direction you wish the bullet's point of impact to change.

Example

At a 100 yard sight-in distance, it will take six clicks of the dial to move the bullet's point of impact six inches.

Magnifier

The SPARC red dot includes a removable 2x magnifier which may be used for longer distance shooting. To attach the magnifier, thread it into the eyepiece end of the scope. Use the focus knob to adjust for sharpest image. No further adjustments are necessary to use.

Installation

To get the best results from the Vortex SPARC red dot riflescope, proper mounting is essential. Although not difficult, the correct steps must be followed. *If you are unsure of your abilities, it would be best to use the services of a qualified gunsmith.*

Mounting Heights for the SPARC

By using various combinations of the included mount risers and shim, the SPARC will allow mounting at four different heights:

Extra-High Mount Height
Uses tall riser and riser shim. Provides lower 1/3 iron sight co-witness on flat top AR15 rifles.

High Mount Height
Uses tall riser. Provides absolute iron sight co-witness on flat top AR15 rifles.

Low Mount Height
Uses short riser. Recommended for most applications other than flat top AR15 rifles.

Note: Using the short riser with the shim adds some additional height if desired.

When changing mount risers, use the included hex wrench to loosen or tighten the four screws attaching the mount riser to SPARC body. When using the riser shim, install between mount riser and body of SPARC. It will also be necessary to use the longer attachment screws when the shim is being used. Vortex recommends using *LocTite Blue* thread locker to ensure these screws do not loosen under use.

Mounting the SPARC

If your firearm is not already equipped with one, install an appropriate Weaver or Picatinny type base and attach per manufacturers instructions. These may be readily purchased at most firearms dealers.

1. Attach the SPARC to the base rail, making sure it is solidly seated in base groove. Position it so that you have at least four inches of eye relief once SPARC is attached in order to prevent recoil injury. Because the SPARC has unlimited eye relief, the scope can be mounted further away if desired.

2. Checking that clamp is fully down and hooked around outside of base, press SPARC down and forward towards muzzle and tighten clamp screw firmly using hex wrench.

Note: *A good practice is to re-check all mounting screws (including riser attachment screws) regularly to be sure they haven't loosened under field conditions.*

Position the SPARC so that you have at least four inches of eye relief.

Sighting in the Rifle

Bore Sighting

After mounting, an initial bore sighting of the SPARC at short range (25–50 yards) will save time and money at the range. This can be done using a bore sighter according to the manufacturer's instructions, or by removing the bolt on some rifles and visually sighting through the barrel.

To visually bore sight a rifle:

1. Place the rifle solidly on a rest and remove the bolt.

2. Sight through the bore and center the target inside the barrel.

3. With the bullseye centered in the bore, make windage and elevation adjustments until the illuminated dot is also centered over the bullseye.

Final Range Sight-In

Final sight-in should be done at the range using the exact ammunition you expect to hunt or shoot with:

1. After the SPARC has been bore sighted, fire a shot or two at your desired zero distance to check that you're roughly on target. *If necessary, adjust the dot to put you near the center of the target (see section on Windage and Elevation Adjustment).*

2. Fire a three-shot group as precisely as possible.

3. Using the center of this group as a reference, make any necessary adjustments for windage and elevation correction. Using arrows for reference, adjust dials in the direction you wish the group to move.

4. Fire a final three-shot group to confirm proper adjustment. Repeat as necessary.

Shooting the SPARC

The key thing to remember when shooting with the SPARC red dot scope is to keep both of your eyes open! This will allow you to take full advantage of the SPARC's ability to get on target very quickly.

Note: *When using the optional magnifier for distance shooting, you may find it easier to shoot with one eye closed due to the increased magnification.*

The SPARC has less than one inch of parallax inside of 50 yards, and is parallax free beyond 50. This means that eye placement is not critical —if you can see the dot on your target, you'll hit there.

Maintenance

Cleaning

The SPARC red dot scope will require very little routine maintenance other than periodically cleaning the exterior lenses. If desired, the scopes exterior may be cleaned by wiping with a soft, dry cloth.

When cleaning the lenses, be sure to use products that are specifically designed for use on coated optical lenses such as the Vortex Lens Pen and FogFree Cleaning Kits.

- Be sure to blow away any dust or grit on the lenses prior to wiping the surfaces.
- Using your breath, or a very small amount of water or pure alcohol, can help remove stubborn things like dried water spots.

Lubrication

All components are permanently lubricated, so no additional lubricant should be applied.

Note: *Do not attempt to disassemble any components of the scope.*

Storage

Keep lens covers closed to protect the SPARC when not in use. Remove the battery when putting in storage for extended periods.

- Avoid storage in direct sunlight or in any very hot location.
- Storage and use in extreme cold will shorten battery life.

Troubleshooting

Please check the following before returning a scope for service:

If the red dot does not illuminate

- Is the battery dead? Replace.
- Is the battery installed correctly? Be sure the battery is oriented with "+" facing the cap.
- Is the battery cover loose? Be sure cover is snug and contact points are clean.

Many times, problems thought to be with the scope are actually mount problems. Be sure all mount screws are tight. You should not be able to twist or move the SPARC in any direction.

Vortex Service and Repair Policy

Vortex Lifetime Limited Warranty

Vortex Optics offers a lifetime limited warranty against manufacturer defects in materials and workmanship for the life of the product. Rest assured, if the SPARC red dot scope should ever require repair, all you need to do is contact Vortex for service.
Call 800-426-0048 or e-mail *service@vortexoptics.com*.

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Dual Use: Shooting Tactical / Hunting

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